



CITY OF LODI COUNCIL COMMUNICATION

AGENDA TITLE: Water Meter Retrofit Policy

MEETING DATE: April 18, 2007

PREPARED BY: Public Works Director

RECOMMENDED ACTION: Direct staff on policy to implement the water meter retrofit program.

BACKGROUND INFORMATION: The State of California has mandated that water meters be retrofitted on existing customer services. This matter was brought to the City Council in 2006 for initial discussion. The Council requested that staff evaluate the possibility of retrofitting meters on a "short" time frame.

The attached presentation provides background information, costs of retrofitting meters, and discussion on the meter retrofit program. This is an abbreviated version of the presentation scheduled for the April 10, 2007 Council Shirtsleeve Session. Following the Shirtsleeve discussion and comments, staff will supplement the attached information and provide recommendations.

FISCAL IMPACT: As described in the attached material; actual impact will depend on the policy direction.

FUNDING AVAILABLE: Not applicable.

Richard C. Prima, Jr.
Public Works Director

RCP/pmf

Attachment

cc: Charlie Swimley, Water Services Manager

APPROVED: _____
Blair King, City Manager

Accelerated Water Meter Retrofit Program

Lodi City Council
Regular Meeting
April 18, 2007

Outline

- Background
- Meter Costs
- “Accelerated” Program
- Choices

Background

- Historically, Lodi has metered high volume non-residential (commercial/industrial) customers
- 1979 – started installing water services “meter ready”
- Active meter retrofit program in late 80's; discontinued due to budget cutbacks in 1993
- 1992 State law required meters on new services
 - Did not require charging per commodity rates
 - Lodi adopted “local rule” – we would charge for meters and install at later date when appropriate rates were established
- New State law now mandates charging for water based on usage for all customers
 - January 1, 2025 deadline for all customers
 - January 1, 2010 deadline for customers with meters
 - Allows cost recovery from rates, fees or charges
- 2006 – City installs 400 residential meters for pilot test

Meter Costs

Service	Number	Unit Cost	Cost (Mil.)
Pre-1979 needing service upgrade	11,000	\$1,200	\$13.2
1979-1992 meter ready services	2,500	\$450	\$1.2
1992+ "meter paid" services	3,200	\$350	\$1.1
City-upgraded Services	500	\$350	\$0.2
Totals:	17,200		\$15.7

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Pre-1979 services are buried approximately 30" deep; installing a meter involves excavation, installing fittings and a riser pipe, a meter box and valves along with the meter itself. The estimate does not include replacing the entire service which, in some circumstances, may be necessary.

Note that as part of the infrastructure replacement program, the City has upgraded approximately 500 water services at no additional charge to the property owner.

The estimates do not include the higher cost for larger services at apartments or cases where two lots share a water service.

“Accelerated” Program

- State law allows for delayed implementation - either “pay as you go” or all at once prior to January 1, 2025
- Council requested information on how program could be accelerated
 - concern for water conservation
 - issues with some customers metered, some not, for the next 18 years

Goal - Conversion on a “tight” time frame

- If sooner, i.e. next three years – then we need \$15.7 million in that time frame; either:
 - from Water Fund
 - – *not feasible - Fund is nearly depleted*
 - raise water rates
 - borrow \$15.7 million, pay back over time
 - *may not be feasible - roughly 20% rate increase for term of borrowing*
 - pay as you go
 - *may not be feasible - roughly 65% rate increase for 3 years*
 - charge property owners of parcels needing meter
 - *is feasible, only real option to implement soon*
 - *charge would range from \$350 to \$1,200 per home and higher for apartment complexes and other situations*
 - *charge could be spread over some short time frame, but meter wouldn't be installed until paid in full since water utility cannot afford to front the cash*
- If later, i.e. sometime next decade – then we need to save up \$15.7+ million
 - *if entire infrastructure replacement revenue (\$2 million/year) was dedicated to this program, it would take 8 years*
 - *given PCE and other capital needs, it would actually take much longer*

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20% figure assumes annual cost of \$1.57 million (10% of capital needs) divided by \$8 million current annual revenue.

65% figure assumes \$15.7 million divided by three years divided by \$8 million annual revenue.

Basic Choices

➤ Who Pays?

- Owner?
- Utility?
- Share? (meter by owner, service by utility; or some other shared cost method)

➤ When?

- Short time frame/Now
- Short time frame/Later
- Longer time frame

Feasibility of Choices (within current rate structure)

	Time Frame		
Who Pays?	Short/Now	Short/Later	Long
Owner	Yes	Yes	Yes
Shared	No	Probably not*	Yes
Utility	No	Probably not*	Probably not*

* Would be "Yes" if rates were increased

Questions/Discussion



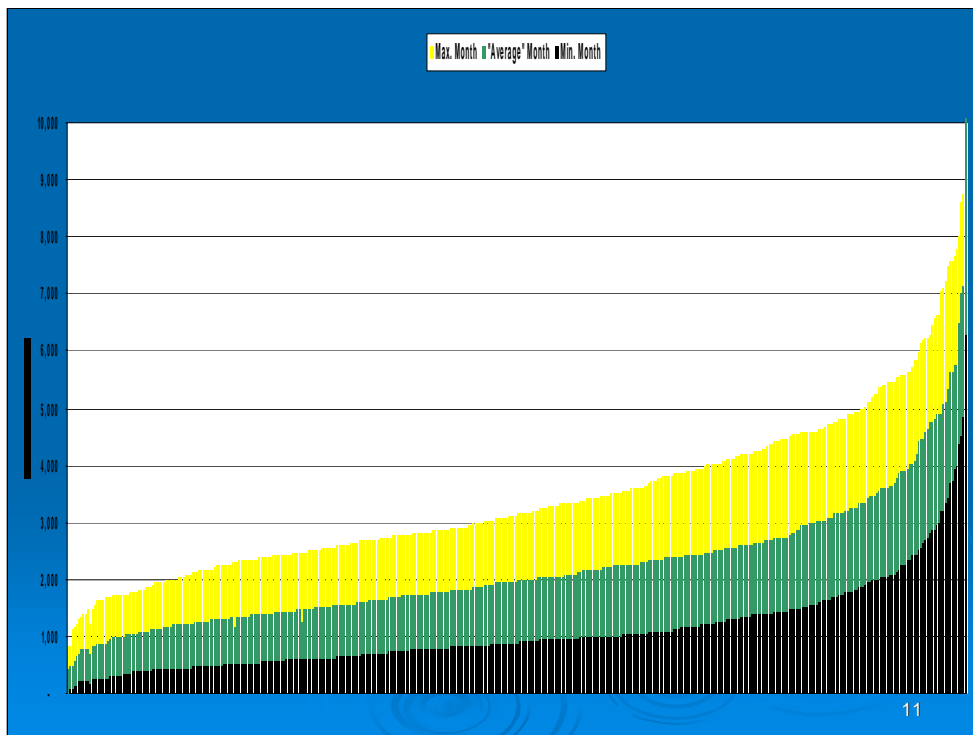
Pilot Test Data

- Installation went fairly smoothly, although these were relatively new services
- Meter reading procedures need to be improved
- Water consumption varied:
 - Average customer used 15,400 gallons/month
 - Highest 10 customers used 2.2 x average
 - Highest 10 customers used 5.3 x lowest 10

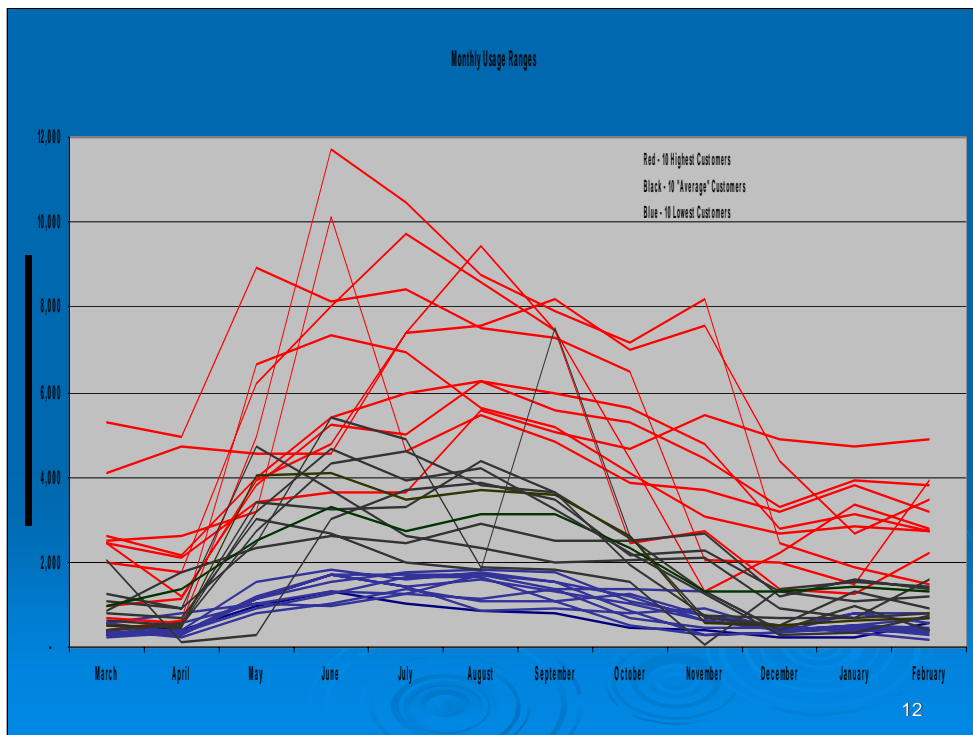
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We would anticipate that some older services will need to have the meter box reset or replaced, possibly some have been buried or incorporated into walkways or landscaping.

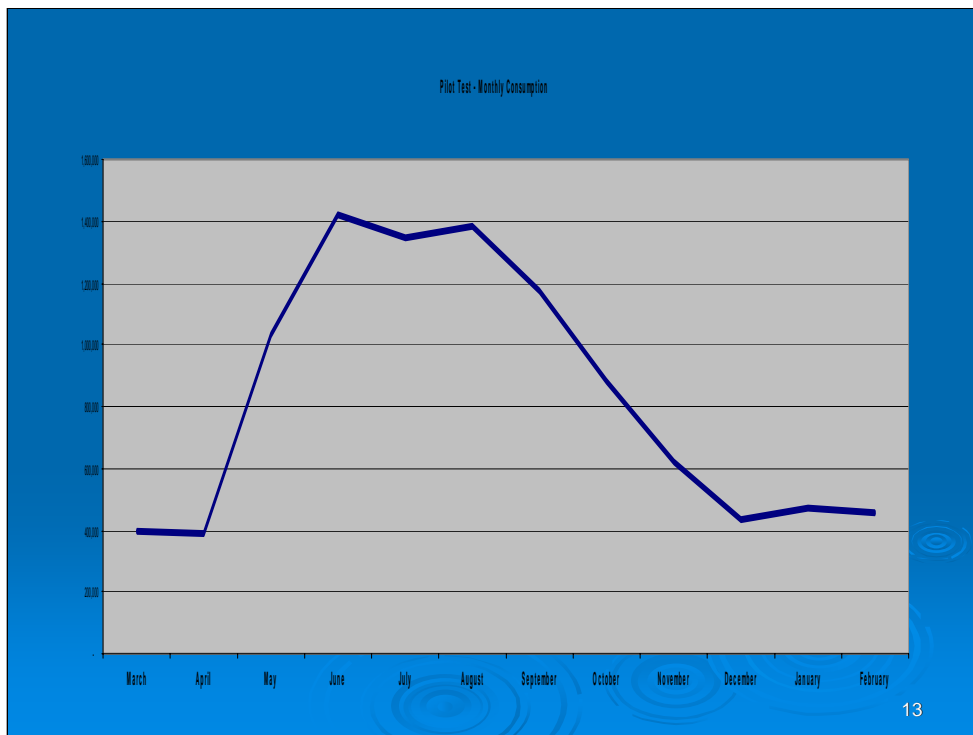
“Missed reads” were a problem with some locations.



Plot shows pilot data ordered from lowest annual consumption at left to highest at right, for highest month, an “average” month and the lowest month.



Plot shows variability of monthly usage for various customers.



Total of all customers in pilot test.

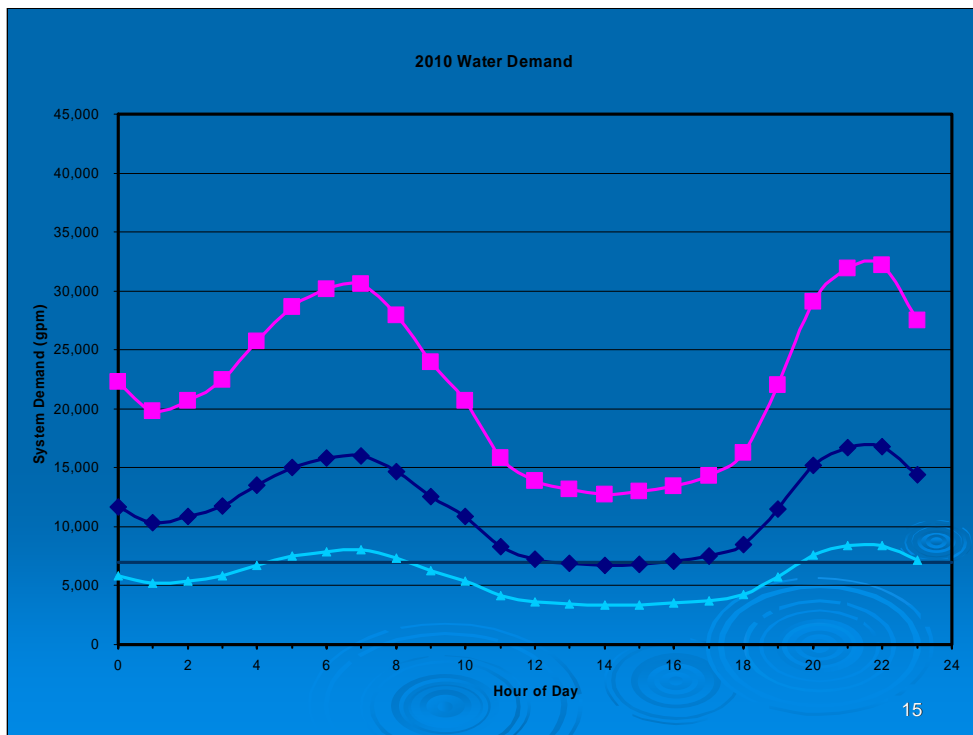
Note that revenue would vary in proportion to consumption; possibly a cash flow problem if Water Utility does not have adequate reserves.

Revenue/Rate Implications of Metering? – Issues

- City's metered rate has only been applied to non-residential customers
- While various adjustments have been made to metered rates over the years, there has been no formal study examining relative cost of service between residential and non-residential customers
- Costs to service large users are not necessarily the same as they are for typical residential customers; example: peak demands

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Metered rate consists of a base charge (to cover some fixed costs) and a single rate for the quantity used.



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Plot shows hourly water production.

Lower line is winter usage; Top line is summer usage; Calculated "Average" Day is in middle.

Note early morning and late evening peaks caused by residential use and landscape irrigation.

Peak demands create higher capital facility needs – more wells, larger pipes.

Other Implications

- Will have some staffing impacts
 - Meter reading can be accomplished with current staff using electronic technology assuming EUD upgrades their meters concurrently
 - Meters and electronic equipment will need staff support (meter problems, high consumption checks, re-reads, record keeping)
- Rate structure should support both conservation and cost relief for low usage customers
- Apartment dwellers would no longer receive an individual City water bill
- Sewer rates could be based on water usage

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EUD meter changes on a short time frame may not be feasible

Staffing – would start with meter technician, similar to Electric Utility

Cost relief – would include automatic reduction for vacant dwellings, vacations (unless you leave the water running!) and for low-volume users

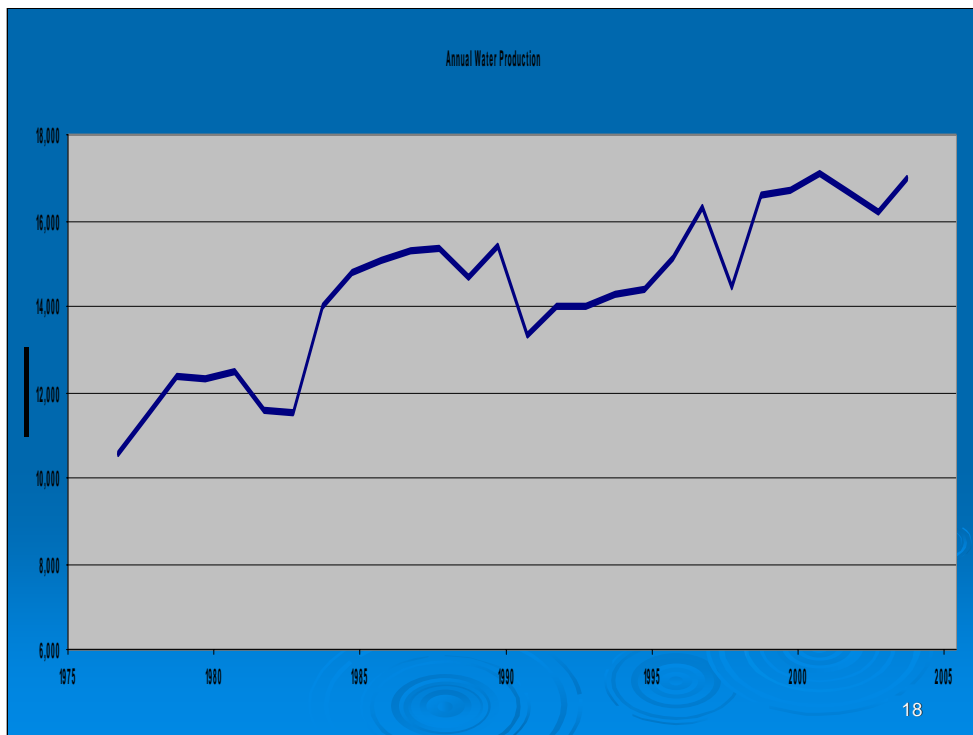
Owners could do sub-metering; unlikely in older units, could do in new construction; also would apply to some businesses tenants

Rate Goals

- Provide sufficient revenue to fund water utility, including debt service, operating expenses and capital replacement
- Be fair and equitable
- Avoid unexpected changes
- Help with water conservation, but recognize water as a necessity of life
- Maintain adequate reserve for unexpected costs and reduced consumption

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Need reserve to help avoid the “..we saved water, now we have to raise rates...” problem



With a fully metered system, water revenue would fluctuate with production. While long term trend is upward, historically there have been significant decreases that have lasted for several years.

How to Meet Rate Goals

- Make minor rate adjustments annually
 - *We do this*
- Maintain a healthy reserve
 - *We try, but the PCE/TCE situation has depleted water fund reserves*
- Have an appropriate fee structure for new development
 - *We do this, but it needs to be updated for surface water program*
- Have rates that address all the goals
 - *This needs to be worked on...*

Revenue/Rate Implications of Metering? – Answers - 1

- Based on the pilot data and assuming existing commercial metered rates:
 - If customers did not change their usage after receiving a meter, revenue would increase.
 - If customers conserved an average of 15% or 20%, revenue would decrease.

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15% reduction in consumption assumed in City's Urban Water Management Plan

20% reduction based on Best Management Practices per California Urban Water Conservation Council

Revenue/Rate Implications of Metering? – Answers - 2

- Based on the Rate Goals and the pilot data, the City should establish a residential metered rate that includes:
 - Base charge, plus
 - Three usage tiers for low, medium and high consumption amounts
- Could implement soon; plan to do detailed rate study later when more meter data is available.